UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,319	08/29/2001	Nobuo Sasaki	SCEI 15.928A	9745

26304　7590　08/19/2005		EXAMINER	
KATTEN MUCHIN ROSENMAN LLP		CUNNINGHAM, GREGORY F	
575 MADISON AVENUE			
NEW YORK, NY 10022-2585	ART UNIT	PAPER NUMBER
	2676	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/942,319	SASAKI, NOBUO
	Examiner	Art Unit	
	Gregory F. Cunningham	2676	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 May 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11, 13-20, 22-31, 33-35, 37-44, 46-55, 57-59, 61-68, and 70-73* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,9,10,22-26,33,34,44,46-50,57,58,68 and 70-72* is/are rejected.

7)☒ Claim(s) *3-7,11,13-19,20,27-31,35,37-43,51-55,59,61-67* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>29 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications of application received 5/05/2005.

2.   The disposition of the claims is as follows: claims 1-11, 13-20, 22-31, 33-35, 37-44, 46-

55, 57-59, 61-68, and 70-73 are pending in the application. Claims 1, 25 and 49 are independent

claims. Claims 8, 12, 21, 32, 36, 45, 56, 60, 69 and 74-132 were cancelled.

Drawings

3.   Drawing objection is withdrawn in view of applicant's remarks.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1, 9, 10, 22-25, 33, 34, 46-49, 57, 58 and 70-72 are rejected under 35

U.S.C. 102(b) as being disclosed by Dalrymple et al. (US Patent 5,142,617), hereinafter

Dalrymple.

A.   Claim 25, "An image processing method for an image processing device which by

processing an image defined by a combination of unit graphic forms [abstract: display area

defined by lines joining vertices with a surface normal vector associated with each vertex], splits

[abstract: subdivide/d] said unit graphic forms into multiple sub-unit graphic forms [abstract:

sub-display areas], the image processing method comprising:

an interpolated line computation step of determining an interpolated line which is a line

that interpolates a space between two vertices from an interpolation vector used for determining

a line that interpolates a space between a given vertex and another vertex of vertices of said unit

graphic forms and from coordinates of said vertices [col. 2, ln. 43 – col. 3, ln. 37]; and

an interpolated point computation step of determining, as the vertices of said sub-unit

graphic forms, interpolated points which are points on said interpolated line [col. 2, ln. 43 – col.

3, ln. 37]" is disclosed [as detailed].

B.   Per independent claims 1 and 49, these are directed to a device and medium, respectively,

for performing the method of independent claim 25, and therefore are rejected to independent

claim 25.

C.   Claim 33, "The image processing method as described in claim 25, wherein: said

interpolation vectors at vertices of said unit graphic forms are normal-direction normal vectors of

the shape to be realized by said unit graphic forms" is disclosed supra for claim 25.

D.   Claim 34, "The image processing method as described in claim 33, wherein: said

interpolation vectors at the vertices of said unit graphic forms further include, in addition to said

normal vectors, vectors which define directions of said interpolated lines at said vertices" is

disclosed supra for claim 25.

E.   Claim 46, "The image processing method as described in claim 25, wherein if the

coordinates of the vertices of said unit graphic forms and the interpolation vectors are recorded

on a recording medium, the image processing method further comprises a playback step of

playing back from the recording medium the coordinates of said vertices and the interpolation

vectors" is disclosed supra for claim 25, particularly in col. 2, ln. 64 – col. 3, ln. 18, such that

[wherein it is desired to load or tile memory locations] corresponds to "playing back from

recording medium".

F.   Claim 47, "The image processing method as described in claim 25, wherein if the

coordinates of the vertices of said unit graphic forms and the interpolation vectors are transmitted

via a transmission route, the image processing method further comprises a reception step of

receiving the coordinates of said vertices and the interpolation vectors transmitted via the

transmission route" is disclosed supra for claim 25. Wherein [loading a memory device]

corresponds to "transmitted via a transmission route".

G.   Claim 48, "The image processing method as described in claim 25, wherein said image is

a three-dimensional image [col. 1, ln. 42-45], and said image processing device includes an

operation means which is operated when a prescribed input is given, and the image processing

method further comprising: a geometry processing step of reading data concerning said unit

graphic forms from a recording medium and performing with respect to the data [col. 4, lns. 9-

13], geometry processing that corresponds to input from said operation means [col. 4, lns. 14-

22], a conversion step of converting said sub-unit graphic forms obtained by splitting said unit

graphic forms resulting after said geometry processing into ones in the coordinate system of a

two-dimensional output device [col. 1, lns. 42-57; col. 6, lns. 62-68], and a rendering step of

rendering said sub-unit graphic forms converted by said conversion step [col. 1, lns. 42-57; col.

6, lns. 62-68]" is disclosed supra for claim 25 and [as detailed]. Wherein [display/ing]

corresponds to "render/ing".

H.   Per dependent claims 9, 10, 22-24, 57, 58 and 70-72 these are directed to a device and medium, respectively, for performing the method of dependent claims 33, 34 and 46-48 and therefore are rejected to dependent claims 33, 34 and 46-48.

J.   Dalrymple discloses claim 73, "The program distribution medium as described in claim 49, which also provides the coordinates of the vertices of said unit graphic forms and the interpolation vectors [col. 4, lns. 23-48]" supra for claim 49 and as [detailed].

6.   Claims 44 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalrymple et al., (US Patent 5,142,617), as applied to claims 1, 25 and 49 above, and further in view of Fowler, (US-PAT-NO: 6,108,011).

A.   Claim 44, "The image processing method as described in claim 25, wherein said interpolated line is a Bezier curve" supra for claim 25. However, Dalrymple does not appear to disclose "wherein said interpolated line is a Bezier curve", but Fowler does in [col. 2, lns. 18-29.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply subdivision disclosed by Dalrymple in combination with shape interpolation and Bezier curves disclosed by Fowler, and motivated to combine the teachings because "Key-frame interpolation is most often applied to sets of data that are single valued, such as a particular angle of rotation, or points in two- or three-dimensions. A more specific application, where the data posed and interpolated is a set of two- or three-dimensional geometric models is commonly referred to as "shape interpolation." as revealed by Fowler in col. 1, lines 54-60.

B.   Per dependent claim 68, this is directed to a medium for performing the method of dependent claim 44, and therefore is rejected to dependent claim 44.

Allowable Subject Matter

7.   Claims 3-7, 11, 13-19, 20, 27-31, 35, 37-43, 51-55, 59 and 61-67 are objected to as being

dependent upon a rejected base claim, but would be allowable if rewritten in independent form

including all of the limitations of the base claim and any intervening claims.

Double Patenting

8.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.
Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686
F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA
1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
         A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to
overcome an actual or provisional rejection based on a nonstatutory double patenting ground
provided the conflicting application or patent is shown to be commonly owned with this
application. See 37 CFR 1.130(b).
         Effective January 1, 1994, a registered attorney or agent of record may sign a terminal
disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37
CFR 3.73(b).

9.   Claims 2, 26 and 50 are rejected under the judicially created doctrine of double patenting

over claims 1, 7 and 13, respectively, of U. S. Patent No. 6,373,491B1 since the claims, if

allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is

covered by the patent since the patent and the application are claiming common subject matter,

as follows:

An image processing device which by processing an image defined by a combination of

unit graphic forms splits said unit graphic forms into multiple sub-unit graphic forms, the image

processing device comprising:

an interpolated line computation means for determining an interpolated line which is the line that interpolates a space between two vertices from an interpolation vector used for determining a line that interpolates a space between a given vertex and another vertex of vertices of said unit graphic forms and from coordinates of said vertices; and

an interpolated point computation means for determining as vertices of said sub-unit graphic forms, interpolated points which are points on said interpolated line, wherein:

if a unit graphic form has vertices 1 through 4, a line segment which joins vertices 1 and 2 of said vertices 1 through 4 and a line segment that joins vertices 3 and 4 of said vertices 1 through 4 lie opposite each other, and a line segment which joins said vertices 1 and 3 and a line segment that joins said vertices 2 and 4 lie opposite each other;

said interpolated line computation means determines an interpolated line 1 which interpolates a space between said vertices 1 and 2, an interpolated line 2 which interpolates said vertices 3 and 4, an interpolated line 3 which interpolates a space between said vertices 1 and 3, and an interpolated line 4 which interpolates said vertices 2 and 4, and also determines an interpolated line 5 which interpolates a space between an interpolated point on said interpolated line 1 and an interpolated point on said interpolated line 2;

said interpolated point computation means determines interpolated points on said interpolated lines 1 through 5 as vertices of said sub-unit graphic forms.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Responses

10.   Responses to this action should be mailed to: Commissioner of Patents and Trademarks,

Washington, D.C. 20231.

Inquiries

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-
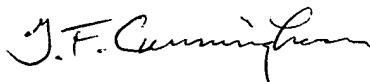
7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new

Central FAX Number is the result of relocating the Central FAX server to the Office's

Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be

sent to the Central FAX Number. To give customers time to adjust to the new Central FAX

Number, faxes sent to the old number (703-872-9306) will be routed to the new number until

September 15, 2005. After September 15, 2005, the old number will no longer be in service and

571-273-8300 will be the only facsimile number recognized for "centralized delivery".

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory F. Cunningham
Examiner
Art Unit 2676

gfc

8/11/2005

MATTHEW C. BELLA
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